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☐ 1: P47987 **PLASMOLIPIN**

BLINK, PubMed, Related Sequences, Taxonomy, OMIM, LinkOut

LOCUS PLLP\_RAT 182 aa ROD 01-OCT-2000  
 DEFINITION PLASMOLIPIN.  
 ACCESSION P47987  
 PID gl2230935  
 VERSION P47987 GI:12230935  
 DBSOURCE swissprot: locus PLLP\_RAT, accession P47987;  
 class: standard.  
 created: Feb 1, 1996.  
 sequence updated: Oct 1, 2000.  
 annotation updated: Oct 1, 2000.  
 xrefs: gi: gi: 532799, gi: gi: 532800, gi: gi: 1143539, gi: gi: 1143540  
 KEYWORDS Transmembrane; Transport; Ionic channel; Ion transport.  
 SOURCE Norway rat.  
 ORGANISM Rattus norvegicus  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;  
 Rattus.  
 REFERENCE 1 (residues 1 to 182)  
 AUTHORS Fischer, I. and Sapirstein, V.S.  
 TITLE Molecular cloning of plasmolipin. Characterization of a novel  
 proteolipid restricted to brain and kidney  
 JOURNAL J. Biol. Chem. 269 (40), 24912-24919 (1994)  
 MEDLINE 95014262  
 REMARK SEQUENCE FROM N.A., AND CHARACTERIZATION.  
 STRAIN=SPRAGUE-DAWLEY; TISSUE=Kidney  
 REFERENCE 2 (residues 1 to 182)  
 AUTHORS Gillen, C., Gleichmann, M., Greiner-Petter, R., Zoidl, G., Kupfer, S.,  
 Bosse, F., Auer, J. and Muller, H.W.  
 TITLE Full-length cloning, expression and cellular localization of rat  
 plasmolipin mRNA, a proteolipid of PNS and CNS  
 JOURNAL Eur. J. Neurosci. 8 (2), 405-414 (1996)  
 MEDLINE 96325522  
 REMARK SEQUENCE FROM N.A., AND SUBCELLULAR LOCATION.  
 STRAIN=WISTAR; TISSUE=Sciatic nerve  
 COMMENT On Jan 15, 2001 this sequence version replaced gi:1346732.

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 collaboration between the Swiss Institute of Bioinformatics and  
 the EMBL outstation - the European Bioinformatics Institute.  
 The original entry is available from <http://www.expasy.ch/sprot>  
 and <http://www.ebi.ac.uk/sprot>  
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[FUNCTION] APPEARS TO BE INVOLVED IN MYELINATION. COULD ALSO  
 PARTICIPATE IN ION TRANSPORT EVENTS AS ADDITION OF PLASMOLIPIN TO  
 LIPID BILAYERS INDUCES THE FORMATION OF ION CHANNELS, WHICH ARE  
 VOLTAGE-DEPENDENT AND K(+)-SELECTIVE.  
 [SUBUNIT] HEXAMER ARRANGED AS A TRIMER OF TWO PLASMOLIPIN SUBUNITS.  
 [SUBCELLULAR LOCATION] INTEGRAL MEMBRANE PROTEIN.  
 [TISSUE SPECIFICITY] EXPRESSION RESTRICTED TO THE SCIATIC NERVE,  
 BRAIN AND KIDNEY. IN THE SCIATIC NERVE, FOUND IN SCHWANN CELLS; IN

THE BRAIN, IN DEVELOPING OLIGODENDROCYTES, ESPECIALLY OF THE CORPUS CALLOSUM, OF CORTICAL WHITE MATTER, IN THE OPTIC NERVE AND IN THE STRATUM RADIATUM AND STRATUM ORIENS OF THE HIPPOCAMPUS. IN KIDNEY, SEGREGATED TO THE APICAL SURFACE OF RENAL TUBULAR EPITHELIA. [DEVELOPMENTAL STAGE] IN THE SCIATIC NERVE, FIRST DETECTED AT POSTNATAL DAY 4, INCREASES TO A MAXIMUM AT DAY P14 AND THEN DECLINES TO MODERATE LEVELS IN ADULthood. IN THE BRAIN, ONSET OF EXPRESSION IS AT DAY P1, LEVELS INCREASE TO REACH A MAXIMUM AT P20 AND DECLINE SLIGHTLY TO ADULthood. [SIMILARITY] BELONGS TO THE MAL FAMILY.

FEATURES                      Location/Qualifiers  
    source                      1..182  
                                /organism="Rattus norvegicus"  
                                /db\_xref="taxon:10116"  
    Region                      1..35  
                                /region\_name="Domain"  
                                /note="CYTOPLASMIC (POTENTIAL)."  
    Protein                      1..182  
                                /product="PLASMOLIPIN"  
    Region                      36..56  
                                /region\_name="Transmembrane region"  
                                /note="POTENTIAL."  
    Region                      57..68  
                                /region\_name="Domain"  
                                /note="EXTRACELLULAR (POTENTIAL)."  
    Region                      69..89  
                                /region\_name="Transmembrane region"  
                                /note="POTENTIAL."  
    Region                      90..99  
                                /region\_name="Domain"  
                                /note="CYTOPLASMIC (POTENTIAL)."  
    Region                      100..120  
                                /region\_name="Transmembrane region"  
                                /note="POTENTIAL."  
    Region                      121..141  
                                /region\_name="Domain"  
                                /note="EXTRACELLULAR (POTENTIAL)."  
    Region                      142..162  
                                /region\_name="Transmembrane region"  
                                /note="POTENTIAL."  
    Region                      163..182  
                                /region\_name="Domain"  
                                /note="CYTOPLASMIC (POTENTIAL)."

ORIGIN  
    1 maefpskvst rtsspaqgv<sup>g</sup> asysa<sup>m</sup>rpdl gfvrs<sup>a</sup>lgvl allqlvlgll vwaliadtpy  
    61 hlypaygwvm fvavflwlv<sup>t</sup> |ivffiiylfq lhmklmvpw plvllvffv<sup>a</sup> atvlyitaf<sup>v</sup>  
    121 ac<sup>a</sup>aavdlts lrg<sup>s</sup>rpynqr saasffa<sup>c</sup>lv miayglsaff sfqawrgvgs naatsqmagg  
    181 ys<sup>\</sup>

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